

**REMARKS**

By this response, Claims 1, 16, 18, 20, 28 and 33 have been amended; accordingly Claims 1-35 and 40-47 are pending in the application. No new matter has been added by the amendments. Reconsideration and allowance are respectfully requested in view of the following remarks.

**Allowable Subject Matter**

Applicants gratefully acknowledge the indication in the Office Action that Claims 30 and 34 contain allowable subject matter. For reasons stated below, however, it is respectfully submitted that all of the pending claims are patentable.

**August 9<sup>th</sup>, 2006 Interview Summary with Examiner Moore**

Applicant would like to thank Examiner Moore for the courteous interview granted on August 9<sup>th</sup>, 2006. During the interview, Applicant's representative, Isaac Angres, discussed the deficiencies of the references of record (further discussed below in the rejections of record) and the use of the language "consisting of" rather than "consisting essentially of" so as to fully exclude the azo compound of Takita et al. Additionally, Applicant suggested that Claims 28 and 33 will be amended to incorporate the ratio of the amount by weight of FeO to that of Fe<sub>2</sub>O<sub>3</sub> which lies within the range going from 0.1:1 to 9:1 and accordingly would be allowable over the art of record.

**First Rejection Under 35 U.S.C. § 103**

Claims 1-21, 26 and 45-47 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,543,450 to Takita et al. ("Takita") for the reasons stated at pages 2-3 of the Office Action. The rejection is respectfully traversed.

Claim 1 has now been amended to exclude the azo component by using the language "consisting of" rather than "consisting essentially of". Claim 1 as now amended recites a composition for enhancing the arc-tracking and arc-erosion resistance properties of an article consisting of, *inter alia*, "an effective amount of a mixture A, B or C formed from: ... in regard to mixture B, mixture B consisting of at least one of: constituents B1 + B2 where constituent B1 has the meaning of constituent A1 and constituent B2 is cerium (IV) oxide and/or hydroxide; and constituents B1 + B3 where constituent B1 has the meaning of constituent A1 and constituent B3 has the meaning of a combination of cerium (IV) oxide and/or hydroxide and titanium oxide TiO<sub>2</sub>." According to Claim 1, the composition can contain an effective amount of mixture B consisting of constituents B1 + B2 wherein B1 is platinum in the form of a platinum complex or compound, and B2 is cerium (IV) oxide and/or hydroxide. That is, the amount of mixture B in the composition is effective to enhance the arc-tracking and arc-erosion resistance of the article. Applicants submit that Takita does not disclose the composition recited in currently amended Claim 1.

The Office Action of record states that Takita teaches a mixture of cerium oxide and a platinum catalyst. Takita's compositions also contain a required azo compound, more specifically 2,2'-azobis(2-methyl butyronitrile) in order to achieve the desired properties of the compositions. See, for example, column 2, lines 52-54,

of Takita. To the extent that Takita's mixture of cerium oxide and a platinum catalyst together with an azo compound has been considered to be "mixture B," Claim 1 as now amended excludes the azo compound from mixture B.

Takita does not suggest that the silicone rubber compositions can have the required nonflammability properties without the addition of the azo compound to the compositions. In the prior telephone conference of January 20, 2006, with Examiner Moore, Examiner Moore stated that the azo compound is not required in Takita's silicone rubber compositions to provide the nonflammability properties, but that the azo compounds are added only to enhance these properties of the compositions. Applicants submit that Takita does not support this position. As indicated in the comparative test results shown in Table 2 of Takita, comparative example 1, which included the platinum additive and cerium oxide, but did not include an azo compound, but suffered complete combustion. That is, comparative example 1 had no nonflammability properties. Takita does not disclose any example composition that did not include an azo compound, but had nonflammability properties. See also column 4, lines 3-4, of Takita. In view of Takita's comparative example 1 combined with the lack of any example composition that did not include an azo compound, but had nonflammability properties, Applicants submit that Takita does not suggest the composition recited in Claim 1. It is also clear that Takita makes the statement (See col. 3, lines 51-54) ***"The component (4) of the present invention, 2,2'-azo bis(2-methyl butyronitrile) greatly improves the non-flammability from the platinum type compounds and cerium type compounds in combination"***

In contrast, the present specification describes examples of the claimed composition that have enhanced arc-tracking and arc-erosion resistance properties,

but do **not** contain an azo compound, which is required for Takita's compounds to give them the needed nonflammability properties.

Accordingly, Applicants respectfully submit that Claim 1 would not have been rendered obvious by Takita. Claims 2-15, and 26 which depend from Claim 1, also would not have been rendered obvious by Takita for at least the same reasons as those stated for Claim 1. Takita does not suggest any composition having the claimed extinction time value, much less that Takita's composition could be optimized to achieve the claimed value and still meet Takita's requirements for the disclosed compositions.

Applicants further submit that the combinations of features recited in independent Claims 16, 18 and 20 are also patentable over Takita for at least the same reasons as those discussed above with respect to Claim 1. Claims 17 and 19 are also patentable for at least the same reasons as Claims 16 and 18, respectively.

Therefore, withdrawal of the rejection is respectfully requested.

**Second Rejection Under 35 U.S.C. 103**

Claims 1-25, 27 and 41 stand rejected under 35 U.S.C. § 103(a) over JP 50-97644 ("JP '644") in view of U.S. Patent No. 4,110,300 to Matsushita ("Matsushita") for the reasons stated at numbered paragraph (3) on page 3 of the Office Action. The rejection is courteously traversed.

JP '644 discloses a self-extinguishing silicone rubber composition. The composition comprises diorganopolysiloxane rubber, reinforcing filler silica, organic peroxide, platinum compound and iron oxide.

The Matsushita '300 patent discloses organopolysiloxane rubber, finely powdered silica, platinum, finely powdered  $\gamma$ -type iron sesquioxide and other metallic additives.

The composition as now recited in Claim 1 can be used to enhance the arc-tracking and arc-erosion resistance properties of an article. As shown in Table 1 at page 27 of the specification, control composition 1, which did not contain mixture A, B or C, exhibited a high arc-induced weight loss. However, as shown by the results given for Examples 1 and 2, ***adding a combination of FeO and Fe<sub>2</sub>O<sub>3</sub> significantly reduced such weight loss***. In addition, the compositions of Examples 1 and 2 exhibited improved flame resistance as compared to control composition 1.

In contrast, neither JP '644 nor Matsushita suggests that both flame resistance and arc-tracking and arc-erosion resistance properties of an article can be enhanced by a composition consisting essentially of an effective amount of mixture A, B or C, and the composition D, as claimed. Neither of these references provides any suggestion that improving the flame resistance of its particular disclosed compositions also results in an improvement in the arc-tracking and arc-erosion resistance properties of those same compositions, much less a significant improvement in the latter properties. Clearly, neither JP '644 or Matsushita '100 provide guidance regarding these problems.

Accordingly, it is respectfully submitted that Claims 1-25, 27 and 41 are also patentable over the combination of JP '644 and Matsushita. Therefore, withdrawal of the rejection is respectfully requested.

**Third Rejection Under 35 U.S.C. 103**

Claims 28, 29, 31 and 32 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 4,699,813 to Cavezzan ("Cavezzan") in view of JP '644 for the reasons stated at numbered paragraph (4) on pages 3-4 of the Office Action. The rejection is respectfully traversed.

The Examiner acknowledges that Cavezzan fails to disclose or suggest the addition of FeO and Fe<sub>2</sub>O<sub>3</sub> to the composition disclosed in Example 6. As such, the Office acknowledges that Cavezzan does not disclose or suggest that "the composition contains an effective amount of d) and f) to enhance the arc-tracking and arc-erosion resistance properties of the article," where "d" is a platinum complex and "f" is a combination of FeO and Fe<sub>2</sub>O<sub>3</sub>. Claim 28 as now amended also recites that "the composition having an extinction time of no more than 8 s, as determined by UL 94V and in said composition the ratio of the amount by weight of FeO to that of Fe<sub>2</sub>O<sub>3</sub> lies within the range of from 0.1:1 to 9:1."

Applicants respectfully submit that JP '644 does not suggest modifying Cavezzan's composition to result in the composition as now recited in Claim 28 which now includes the ration of FeO to that of Fe<sub>2</sub>O<sub>3</sub>. There is no disclosure or suggestion in Cavezzan that the organopolysiloxane composition should impart arc-tracking and arc-erosion resistance properties to an article comprising the composition. The Examiner's position appears to be that it would have been obvious to add FeO and Fe<sub>2</sub>O<sub>3</sub> to any known composition for the reason that JP '644 adds these to its silicone rubber composition. However, the Office Action has not established that it would have been desirable to improve the flame resistance of Cavezzan's organopolysiloxane composition. For example, the Office Action has

identified no disclosure in Cavezzan that the organopolysiloxane composition is used in an application in which enhanced flame resistance is needed, much less the enhanced arc-tracking and arc-erosion resistance properties and extinction time recited in Claim 1. Accordingly, Applicants respectfully submit that the applied combination of references does not support the alleged *prima facie* obviousness. Thus, Claim 28 as now amended is patentable over the applied references.

Claims 29, 31 and 32 depend from Claim 28 and thus are also patentable. Therefore, withdrawal of the rejection is respectfully requested.

#### **Fourth Rejection Under 35 U.S.C. 103**

Claims 33 and 35 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,674,966 to McDermott et al. ("McDermott") in view of JP '644 for the reasons stated at numbered paragraph (5) on page 4 of the Office Action. The rejection is respectfully traversed.

Regarding Claim 33, the Examiner acknowledges that McDermott fails to disclose or suggest the addition of FeO and Fe<sub>2</sub>O<sub>3</sub> to the composition disclosed in Example 6. As such, the Office acknowledges that McDermott does not disclose or suggest that "the composition contains an effective amount of d) and f)," where "d" is a platinum complex and "f" is a combination of FeO and Fe<sub>2</sub>O<sub>3</sub>. Claim 33 also as now amended recites that "a), b), c), d) and e) form a composition A, and the composition contains 100 parts by weight of the composition A and 5 parts by weight of f) and wherein in said composition the ratio of the amount by weight of FeO to that of Fe<sub>2</sub>O<sub>3</sub> lies within the range of from 0.1:1 to 9:1."

Applicants respectfully submit that JP '644 does not suggest modifying McDermott's composition to include FeO and Fe<sub>2</sub>O<sub>3</sub> in the specified ratios, as recited in now amended Claim 33. There is no disclosure or suggestion in McDermott that the molding resin should impart arc-tracking and arc-erosion resistance properties to an article comprising them. Applicants submit that the Office Action has not established that it would have been desirable to improve the flame resistance of McDermott's resin. The Office Action has identified no disclosure in McDermott that the resin composition is used in an application in which enhanced flame resistance is needed, much less the enhanced arc-tracking and arc-erosion resistance properties that are provided by the composition recited in Claim 33. Accordingly, Applicants respectfully submit that the applied combination of references does not support the alleged *prima facie* obviousness. Thus, Claim 33 is patentable over the applied references.

Claim 35 depends from Claim 33 and thus is also patentable. Therefore, withdrawal of the rejection is respectfully requested. Therefore, withdrawal of the rejection is respectfully requested.

#### **Fifth Rejection Under 35 U.S.C. 103**

The rejection of Claims 40 and 42-44 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,543,450 to Takita et al. ("Takita") for the reasons stated at pages 4-5 of the Office Action is respectfully traversed. Since Claims 40 and 42-44 depend on amended Claims 1, 16, 18 and 20 and they are now believed to be patentable as they exclude the azo compound, it is believed that those claims are now patentable.



**Removal of the Rejections over Takita et al. '450, JP 50-97644, Cavezzan '813, Matsushita '300 and MacDermott et al. '966**

None of the above references disclose or suggest the claimed compositions of the instant invention. Thus, Applicants assert that the Examiner has failed to make out a *prima facie* case of obviousness with regard to the 35 USC §103(a) rejection over any of the above references. Three criteria must be met to make out a *prima facie* case of obviousness:

(1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

(2) There must be a reasonable expectation of success.

(3) The prior art reference (or references when combined) must teach or suggest all the claim limitations.

See MPEP §2142 and *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991). In particular the Examiner has failed to meet the third element to make a *prima facie* obviousness rejection. Because none of the cited references disclose a composition the ratio of the amount by weight of FeO to that of Fe<sub>2</sub>O<sub>3</sub> lies within the range of from 0.1:1 to 9:1.

**Conclusion**

With the above remarks and amendments, Applicants believe that the claims as they now stand define patentable subject matter such that passage of the instant invention to allowance is warranted. A Notice to that effect is earnestly solicited.

If there are any questions concerning this response, the Examiner is respectfully requested to contact the undersigned at the number given below.

Respectfully submitted,

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